

PATIENT PRESENTING CLINICAL SIGNS

Dora Smith History: Vomiting, possible dietary indiscretion -see rad report Current meds: cerenia
Abnormal PE/Chem/CBC/UA Results: PCV/TS 61/8.2 > 54/7.4, ALT 873, cPL normal

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine

Urinary System

BREED

Chihuahua

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

SEX

Spayed Female

Kidneys

AGE

11 years

The **left** kidney measures 3.91 cm. The capsule is smooth. The cortex is mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. Blood flow is excellent. The surrounding mesentery is not hyperechoic.

WEIGHT

12.6 lbs

The **right** kidney measures 4.04 cm. The capsule is smooth. The cortex is moderately hyperechoic, i.e. it is hyperechoic to the liver. A mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. Blood flow is very good. The surrounding mesentery is not hyperechoic.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Aortic bifurcation/trifurcation

No abnormalities observed.

IMAGING PERFORMED BY

Jessica Miller, RDMS

Adrenal Glands

HOSPITAL NAME

Newton VH

The **left** adrenal gland measures 0.48 cm at the cranial pole, 0.43 cm at the caudal pole and 1.56 cm in length. A well-defined nodule is noted at the cranial pole, however, no abnormalities are noted with the gland's overall echogenicity or echotexture. The nodule measures 4.01 mm in diameter x 4.09 mm in length. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

REFERRING VET

Dr. Verhalen

The **right** adrenal gland measures 0.36 cm at the cranial pole, 0.50 cm at the caudal pole and 1.46 cm in length. The caudal pole is mildly "plump", but within the normal reference range. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

INVOICE

30249

Spleen

DATE

5/10/22

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.



PATIENT *Liver*

Dora Smith There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. Perivascular cuffing is observed which may be associated with the deposition of fat, mineralization, and/or fibrosis. No abnormalities are observed with the hepatic vessels visualized.

SPECIES

Canine The gallbladder (GB) is mildly distended with a mild to moderate amount of free floating and inspissated echogenic material. The GB wall is within normal limits in thickness and echogenicity. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

BREED

Chihuahua

SEX

Gastrointestinal

Spayed Female

A moderate to large amount of fluid and gas, as well as some ingesta, are present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. Subjectively, the submucosa is thicker than usual. Peristalsis is decreased, i.e. an ileus is present. mesentery surrounding the stomach is hyperechoic.

AGE

11 years

The duodenum is filled with a moderate amount of gas, fluid and ingesta, however, decreased peristalsis is noted. Corrugation is not apparent.

WEIGHT

12.6 lbs

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. The lumen of the small intestines is filled with gas and fluid and a small amount of ingesta. A mild ileus is suspected based on the "to and fro" motion. Abnormally dilated loops of bowel are not observed.

INTERPRETED BY

The colonic wall is not thickened and mural detail is considered normal. A large amount of gas is present within the colon, as well as formed stool.

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Pancreas

**IMAGING
PERFORMED BY**

No overt abnormalities are observed with the echogenicity or echotexture of the left limb, although it appears slightly prominent in a few views. This may be due to the hyperechoic mesentery surrounding the stomach. However, the body and right limb of the pancreas are prominent. Active pancreatitis cannot be excluded. Overt signs of neoplasia are not appreciated.

Jessica Miller, RDMS

HOSPITAL NAME

Newton VH

Other

REFERRING VET

Lymph nodes

Dr. Verhalen

No abnormalities are observed.

INVOICE

Abdominal effusion

30249

A scant amount of anechoic fluid is visualized between the diaphragm and liver.

DATE

5/10/22



PATIENT *Thorax*

Dora Smith A small portion of the thorax and cardiac silhouette is observed. There is no evidence of pleural or pericardial effusion.

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

11 years

WEIGHT

12.6 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Jessica Miller, RDMS

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Verhalen

INVOICE

30249

DATE

5/10/22

ULTRASONOGRAPHIC FINDINGS

- The abnormalities observed with the stomach and duodenum are suggestive of inflammation and an ileus. These changes may be due to the acute vomiting episodes recently experienced. A foreign body cannot be excluded based on the gas pattern in the stomach, pylorus and duodenum, as well as the ileus present. An obvious foreign body is not observed, however, they can be difficult to identify, particularly in the stomach. If a foreign body is strongly suspected, the radiographs may be repeated to ensure the original gas pattern and ingesta have moved since the original radiographs, or a sonographic re-evaluation of the GI tract may be performed.
- An ileus of the small intestines is also present, which may be secondary to vomiting and possibly pancreatitis. Underlying inflammation, such as inflammatory bowel disease, may also be present depending on Dora's history.
- Acute pancreatitis cannot be excluded. If present, it is likely secondary to the vomiting episodes and gastroenteritis.
- Although the presence of gall bladder sludge is often clinically insignificant, some dogs show clinical signs of gastroesophageal reflux disease as a result of the sludge, therefore, obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required depending on the Dora's history.
- The well-defined nodule noted at the cranial pole of the left adrenal gland is an incidental finding. The most likely cause is a benign adenoma. There is no evidence of neoplasia.
- Mild renal changes are present, which are suggestive of age related degeneration. The right kidney is slightly more affected than the left. Blood flow to both kidneys is still very good.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

As mentioned above, an obvious foreign body is not observed, however, they can be difficult to identify, particularly in the stomach. If a foreign body is strongly suspected, the radiographs may be repeated to ensure the original gas pattern and ingesta have moved since the original radiographs, or a sonographic re-evaluation of the GI tract may be performed.

However, if Dora's vomiting and overall condition have stabilized, medical management may be pursued with intravenous or subcutaneous fluids and anti-emetics. Ondansetron may be more effective compared to maropitant.

Analgesia for visceral pain, such as buprenorphine, is suggested.

A 10-14 day trial with famotidine or omeprazole every 12 hours is suggested.



PATIENT

An easily digestible diet that is moderately restricted in fibre is recommended to help decrease gas and bloating.

Dora Smith

Small, frequent meals are suggested.

SPECIES

Obtaining a history regarding signs of GERD from the client is suggested.

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

11 years

WEIGHT

12.6 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Jessica Miller, RDMS

HOSPITAL NAME

Newton VH

REFERRING VET

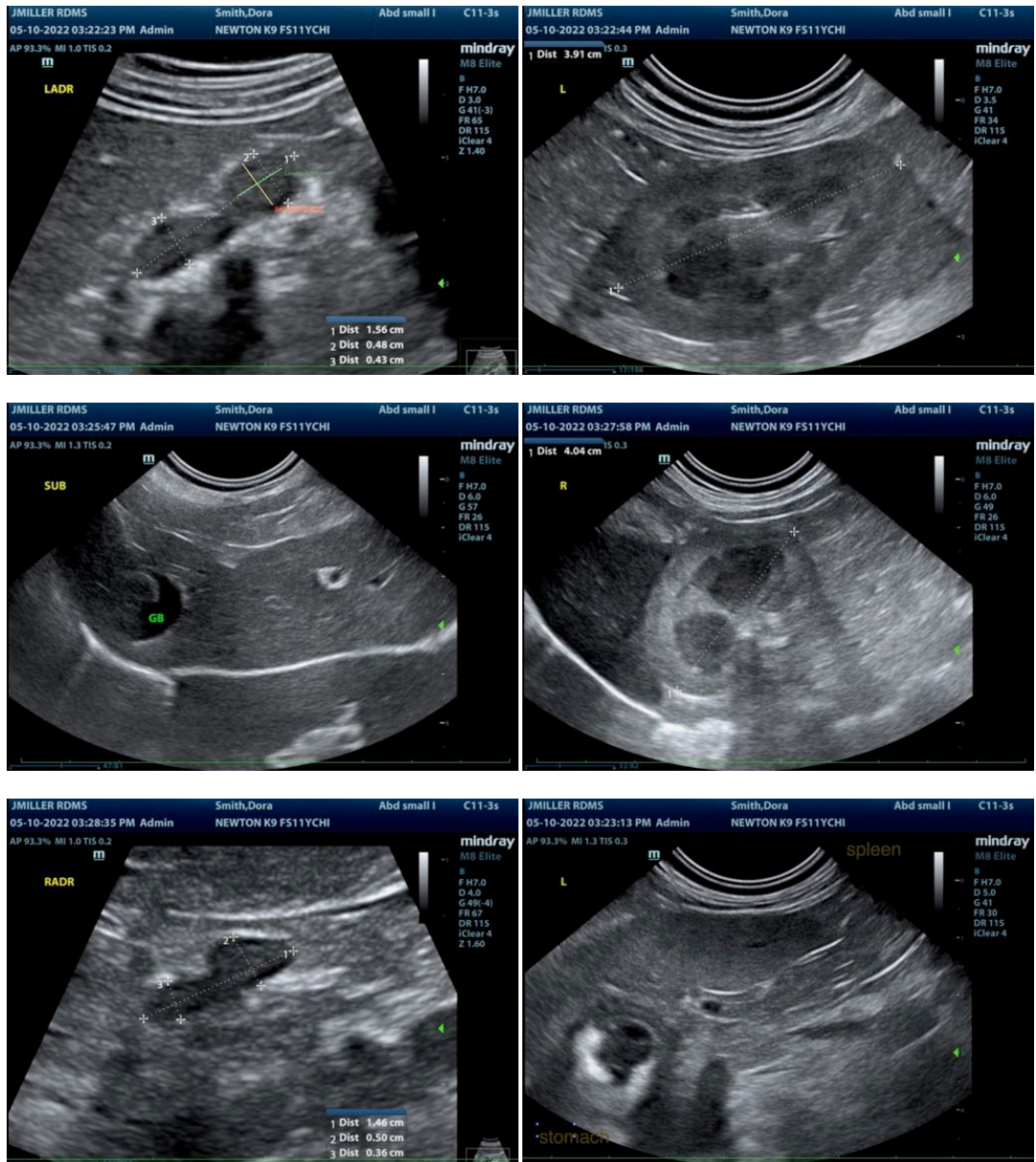
Dr. Verhalen

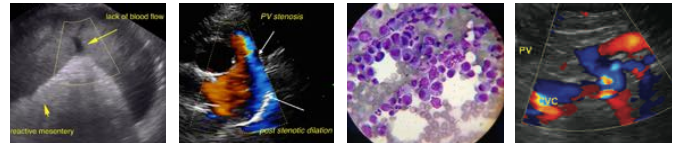
INVOICE

30249

DATE

5/10/22





PATIENT

Dora Smith

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

11 years

WEIGHT

12.6 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Jessica Miller, RDMS

HOSPITAL NAME

Newton VH

REFERRING VET

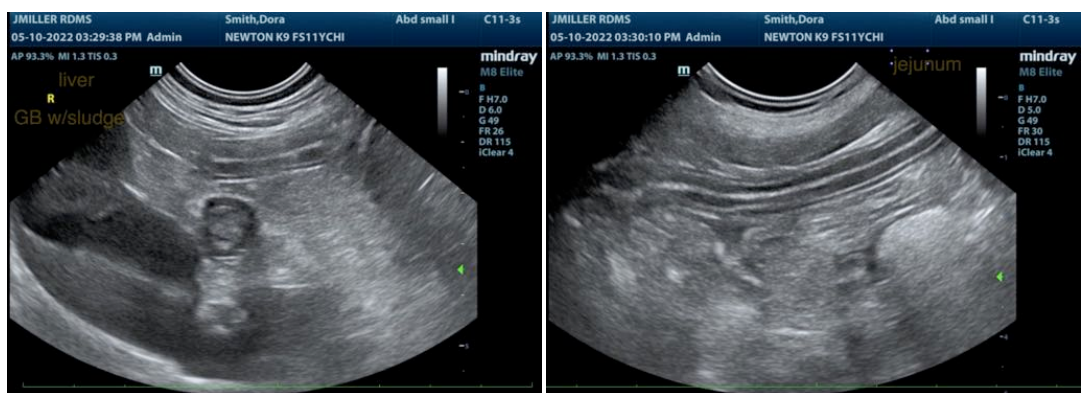
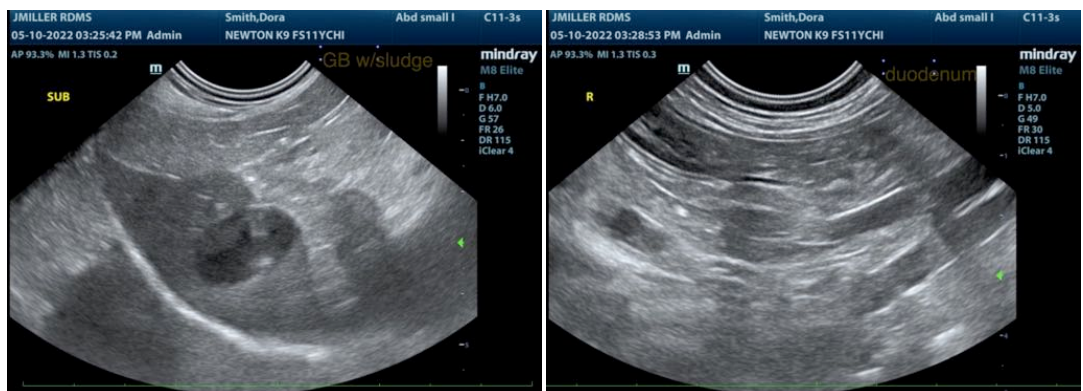
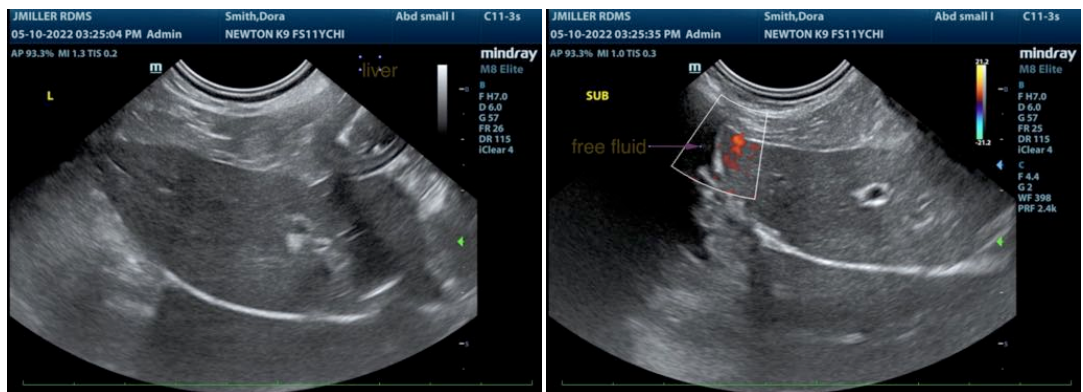
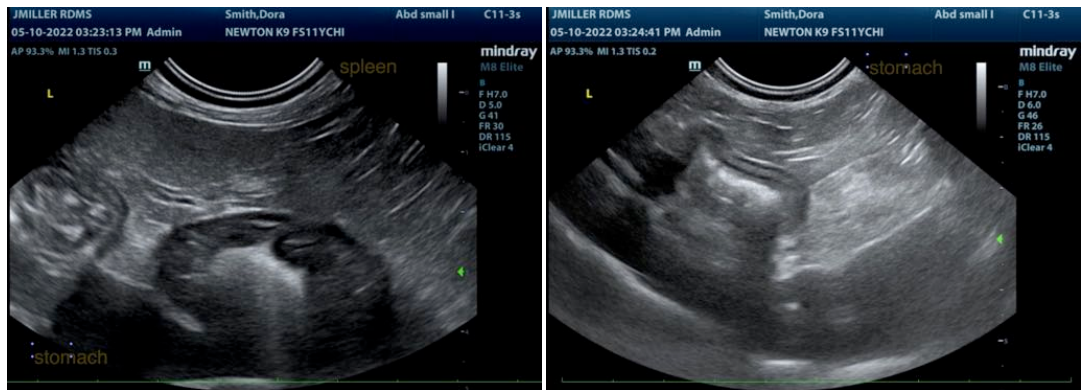
Dr. Verhalen

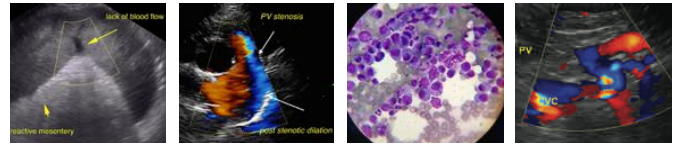
INVOICE

30249

DATE

5/10/22





PATIENT

Dora Smith

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

11 years

WEIGHT

12.6 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Jessica Miller, RDMS

HOSPITAL NAME

Newton VH

REFERRING VET

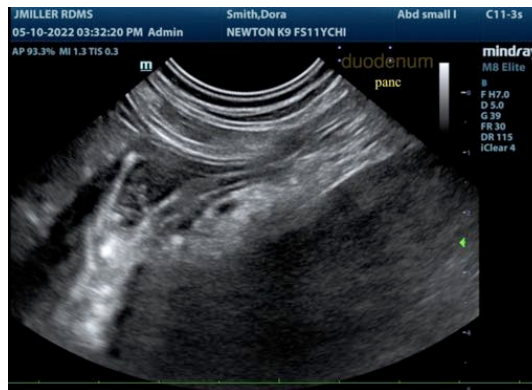
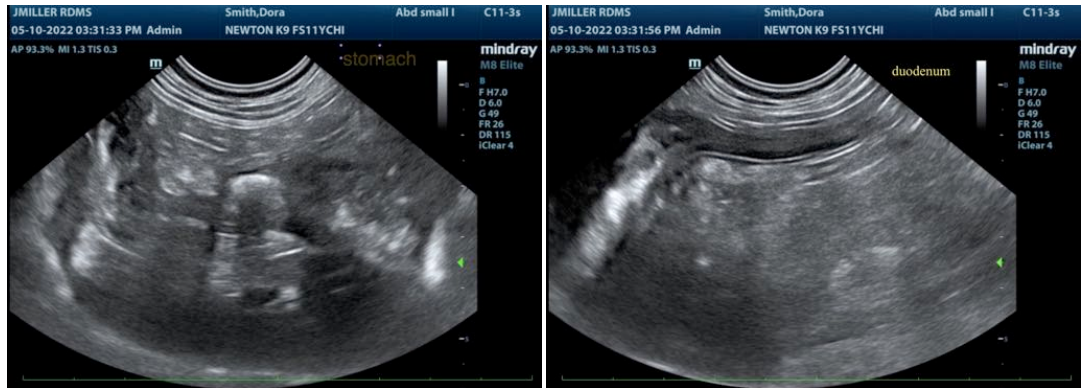
Dr. Verhalen

INVOICE

30249

DATE

5/10/22



The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com